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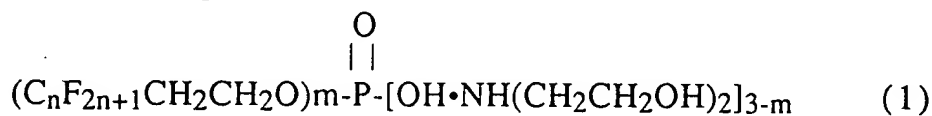
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(54) Title Of The Invention: Eye Makeup Cosmetics

(57) [Abstract]

[Construction] Eye makeup cosmetics characterized in that they contain 0.01 to 10 wt% of fibers from 1 to 7 denier thick and 0.5 to 5 mm long whose surfaces have been treated with fluorine compounds shown by general formulas (1) and (2).

[Chemical 1]



(where n is an integer from 6 to 18 and m is 1 or 2).

[Chemical 2]



(where a is an integer from 1 to 12, b is an integer from 1 to 5, and X indicates alkoxy groups, halogen atoms or alkyl groups, which may be the same or different, except that X cannot be all alkyl groups).

[Effect] Fiber dispersability is increased, eye makeup cosmetics in which these fibers are compounded show increased uniformity of adhesion of the fibers on eyelashes and eyebrows, and phenomena such as bundling and branching of adhesion are improved upon.

[Scope Of Patent Claim]

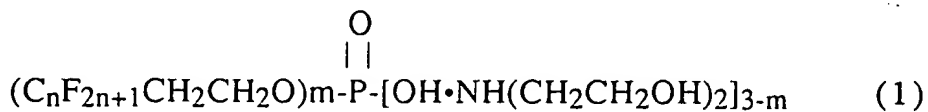
[Claim Paragraph 1] Eye makeup cosmetics characterized in that they contain fibers whose surfaces are treated with fluorine compounds.

[Claim Paragraph 2] Eye makeup cosmetics described in Claim Paragraph 1 where the fiber thicknesses are from 1 to 7 denier and lengths are in a range from 0.5 to 5 mm.

[Claim Paragraph 3] Eye makeup cosmetics described in Claim Paragraph 1 where the fiber thicknesses are from 1 to 7 denier and lengths are in a range from 1 to 3 mm.

[Claim Paragraph 4] Eye makeup cosmetics described in any of Claim Paragraphs 1 through 3 where the fluorine compounds are 1 or 2 or more types of compounds selected from among the perfluoroalkyl phosphate ester diethanolamine salts shown by the following general formula (1)

[Chemical 1]



(where n is an integer from 6 to 18 and m is 1 or 2).

[Claim Paragraph 5] Eye makeup cosmetics described in any of Claim Paragraphs 1 through 3 where the fluorine

compounds are 1 or 2 or more types of compounds selected from among the perfluoroalkyl silanes shown by the following general formula (2)

[Chemical 2]



(where a is an integer from 1 to 12, b is an integer from 1 to 5, and X indicates alkoxy groups, halogen atoms or alkyl groups, which may be the same or different, except that X cannot be all alkyl groups).

[Detailed Explanation Of The Invention]

[0001]

[Field Of Industrial Utilization] The present relates to eye makeup cosmetics for eyelashes and/or eyebrows that have uniform adhesiveness, do not adhere in a state of divided branches in which the fibers are in bundles on the eyelashes and eyebrows, and the fibers have superior dispersability in the product.

[0002]

[Prior Technology] Prior eye makeup cosmetics for eyelashes and eyebrows have been used to beautify by enhancing the forms of eyelashes and eyebrows, and their required functions are to curl the eyelashes, give a long lash sensation to eyelashes and eyebrows and increase the sensation of volume. Various materials have been compounded in order to satisfy these functions, with wax ingredients and film

forming agents being much used for curl sensation and volume sensation, and compounding fibers being used for volume sensation and long lash sensation.

[0003]

[Problems To Be Resolved By The Invention] However, the fibers used had poor dispersability in product systems, they were nonuniform did not adhere along the eyelashes and eyebrows when attached to the eyelashes and eyebrows, and they adhered in divided branches as bundles on the eyelashes and eyebrows, damaging the appearance of beauty. Attempts at improvement were made by compounding surfactants to raise the dispersability of the fibers, but the results cannot be said to be satisfactory.

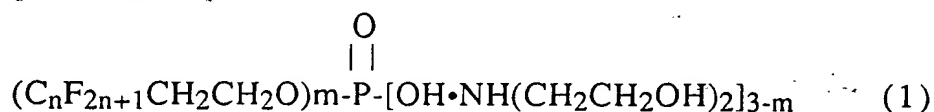
[0004]

[Means For Resolving The Problems] With this situation in mind, the present inventors conducted keen investigations aimed at resolving the problems, and as a result they discovered that by treating fiber surfaces with fluorine compounds to raise their dispersability and then compounding these fibers, it was possible to obtain fibers of superior properties that adhered uniformly in the direction of the hairs in the eyelashes and eyebrows and suppressed adherence in divided branches or in bundles, and thus they perfected the present invention.

[0005] That is, the present invention is one that offers makeup cosmetics characterized in that they contain fibers whose surfaces have been treated with fluorine compounds.

[0006] Examples of the fluorine compounds used in the present invention are the perfluoroalkyl phosphate ester diethanolamine salts shown by the following general formula (1)

[Chemical 3]



(where n is an integer from 6 to 18 and m is 1 or 2). (Such as ASAHIGAADO AG 530 made by Asahi Garasu K. K. (Asahi Glass Co., Ltd.), and the perfluoroalkyl silanes shown by the following general formula (2)

[Chemical 4]]



(where a is an integer from 1 to 12, b is an integer from 1 to 5, and X indicates alkoxy groups, halogen atoms or alkyl groups, which may be the same or different, except that X cannot be all alkyl groups), such as LS-160, LS-360, LS-912, LS-1080, LS-1090 and LS-1465 made by Shinetsu Kagaku Kogyo K. K. (Shinetsu Chemical Industry Co., Ltd.) and XC95-418, XC95-466, XC95-467, XC95-468, XC95-469, XC95-470, XC95-471 and XC95-472 made by Toshiba Shirikon K. K. (Toshiba Silicone Co., Ltd.).

[0007] The treated fibers may be synthetic fibers such as nylon and polyester, man-made fibers such as rayon, natural fibers such as cellulose or semi-synthetic fibers such as acetate artificial silk, but as long as the fibers are used in conventional cosmetics there are no particular restrictions of any sort.

[0008] The thickness of the fibers should be from 1 to 7 denier (abbreviated below as D). The length of the fibers should be from 0.5 to 5 mm, with 1-3 mm being more preferred. These fibers may be used in combinations of 1 or 2 or more in terms of material, thickness and length.

[0009] There are no particular restrictions as to the method of treating these fibers with fluorine compounds, but to give an example, the method may be to heat and dissolve the fluorine compounds in such as acetone or toluene, add 1 or 2 or more types of fibers therein, and stir and then remove the solvent to coat or adhere the fluorine compounds to the fibers, and as required to apply further heat treatment.

[0010] Also, in the case of using alkyl phosphate ethanolamine salts as the fluorine compound, a slurry can be made by adding water to similar fibers, while on the other hand alkyl phosphate ester diethanolamine salts can be added to water and stirred and emulsified at 0.1 to 5 wt% (hereafter given as %), and after mixing by adding it slowly to the said slurry and making it acidic, the emulsion is broken down by letting it stand at room temperature or elevated temperature,

after which it may be washed, filtered and dried. Further, the treatment amount of fluorine compounds will vary depending on the type, but 1 to 50% and more particularly 5 to 20% relative to the fibers are preferred.

[0011] The compounding amount of fibers treated with fluorine compounds within the present invention varies depending on fiber type, but preferably they will be compounded at 0.01 to 10%, and more preferably 0.1 to 5%.

[0012] Within a range where the effect of the present invention will not be affected, it is also possible to compound powders, solids, liquids and pastes conventionally used in eye makeup, including such as gelling agents, emulsion polymers, surfactants, polyhydric alcohols, ultraviolet absorbents, beauty ingredients, glycols, water soluble ingredients, resins, preservatives and perfumes.

[0013]

[Examples] The invention will now be further explained by offering the following examples. However, the present invention is in no way restricted by these examples.

[0014] Examples 1 to 3 and Comparative Examples 1 to 3

The prescription film type mascara shown in Table 1 was prepared, and evaluations were made of fiber dispersability, fiber adhesion uniformity, sensation of use while being used and continuity of effect. The results are shown in Table 2.

[0015]

[Table 1]

(Components)	(wt%)					
	Examples			Comp	Examples	
	1	2	3	1	2	3
(1) Ester polyacrylate emulsion	50	50	50	50	50	50
(2) Polymethacrylate	2	2	2	2	2	2
(3) Triethanolamine	2.5	2.5	2.5	2.5	2.5	2.5
(4) Butylene glycol	3	3	3	3	3	3
(5) Sodium chloride	0.5	0.5	0.5	0.5	0.5	0.5
(6) Preservative	sa	sa	sa	sa	sa	sa
(7) Silica	2	2	2	2	2	2
(8) Pigment	10	10	10	10	10	10
(9) Perfume	0.1	0.1	0.1	0.1	0.1	0.1
(10) Nylon fibers (1.50, 1 mm) treated with 5% ASAHIGAADO	10	5	1	-	-	-
(Note 1)						
(11) Nylon fibers (1.50, 1 mm)	-	-	-	10	5	1
(12) Distilled water	r	r	r	r	r	r

Note 1: ASAHIGAADO AG530 was used in the 5% ASAHIGAADO treatment.

sa Suitable Amount

r Remainder

[0016] (Method Of Manufacture)

A. (2) through (6) and (12) were mixed and melted by heating.

B. (7), (8), (10) and (11) were added to A and dispersed to uniformity.

C. (1) and (9) were added to B, mixed and homogenized.

D. C was packed in containers as the product.

[0017] (Evaluation Of Dispersion)

Thin films of film type mascara were drawn onto glass plates using a doctor blade, and after drying, judgments were made regarding the presence or absence of condensates.

Ratings

Absolutely none	⊙
A little	○
Present	▽
Very much present	X

[0018] (Evaluation Of Comfort On Eyelashes, Uniform Fiber Adhesion, Sensation Of Use During Use, Water And Oil Resistance And Continuity Of Effect) A panel of 20 women made use tests of the mascaras in Example 2 and Comparative Example 2, with evaluations on the following basis.

Rating Points

Very good	3 points
Good to ordinary	2 points
Bad	1 point

Ratings

Average points:

2.5 or more	©
Over 2.0 but below 2.5	O
Over 1.5 but below 2.0	∇
Below 1.5	X

[0019]

[Table 2]

<u>Rated Item</u>	<u>Examples</u>			<u>Comp Examples</u>		
	1	2	3	1	2	3
Fiber dispersability	O	©	©	X	X	∇
Comfort on eyelashes	O	©	©	∇	∇	∇
Uniform fiber adhesion	O	©	©	X	X	X
Sensation of use during use	O	©	©	X	∇	∇
Water and oil resistance	©	©	©	O	O	O
Continuity of effect	©	©	©	O	O	O

[0020] It will be apparent from Table 2 that the mascara of the present invention compounded with nylon fiber treated with 5% ASAHIGAADO, compared to the comparative example, was definitely superior in fiber dispersability, sensation of use during use and fiber adhesion uniformity, and was proven superior to the comparative example in product quality.

[0021]

Example 4. Emulsion Film Type Mascara

(Prescription)	(wt%)
(1) Stearic acid	2
(2) Beeswax	8
(3) Cetanol	1
(4) Polyoxyethylene sorbitan monooleate (20 E. O.)	0.8
(5) Sorbitan sesquioleate	0.4
(6) Pigment	15
(7) Triethanolamine	1
(8) Preservative	Suitable amount
(9) 5% ASAHIGAADO treated nylon fiber (2D, 1.5 mm) (Note 1)	3
(10) Ester polyacrylate emulsion	40
(11) Perfume	Suitable amount
(12) Purified water	Remainder

Note 1: Same as before.

[0022] (Method Of Manufacture)

A. After heating and melting (1) through (5), (6) was added and dispersed uniformly.

B. (7) through (10) and (12) were heated and melted.

C. A was added to B, emulsified, and after cooling, (11) was added.

D. C was packed in containers as products.

[0023]

Example 5. Solvent Type Mascara

(Prescription)	(wt%)
(1) Ester starch resinate	8
(2) Paraffin wax	8
(3) Isoparaffin	Remainder
(4) Pigment	10
(5) Nylon fiber treated with 5% ASAHIGAADO (3D, 1 mm) (Note 1)	3
(6) Perfume	Suitable amount

Note 1: Same as before.

[0024] (Method Of Manufacture)

A. (4) and (5) were dispersed uniformly in part of (3).

B. The remainder of (3) was heated and melted with (1),
(2) and (6).

C. A and B were mixed uniformly.

D. C was packed into containers as the product.

[0025]

Example 6. Liquid Eyebrow

(Prescription)	(wt%)
(1) Polymethacrylate	2
(2) Triethanolamine	2.5
(3) Butylene glycol	3
(4) Sodium chloride	0.5
(5) Preservative	Suitable amount

(6) Silica	2
(7) Pigment	8
(8) Nylon fiber treated with 5% ASAHIGAADO (1D, 0.5 mm) (Note 1)	2
(9) Perfume	Suitable amount
(10) Ester polyacrylate emulsion	40
(11) Purified water	Remainder

Note 1: Same as before.

[0026] (Method Of Manufacture)

A. (1), (5) and (11) were mixed and melted by heating.

B. (6) through (8) were added to A and dispersed uniformly.

C. (9) and (10) were added to B and dispersed uniformly.

D. C was packed in containers as the product.

[0027]

[Effect Of The Invention]

As described in detail above, the dispersability of fibers is raised by treating the fibers with fluorine compounds, eye makeup cosmetics with these fibers increase the uniformity of adhesion of the fibers to eyelashes and eyebrows, and the phenomena of branching and bundling of fibers on eyelashes and eyebrows that were prior problems are improved upon. Thus the eye makeup cosmetics of the present invention are very useful, having superior qualities such as sensation of use during use and uniform fiber adhesion.

End.